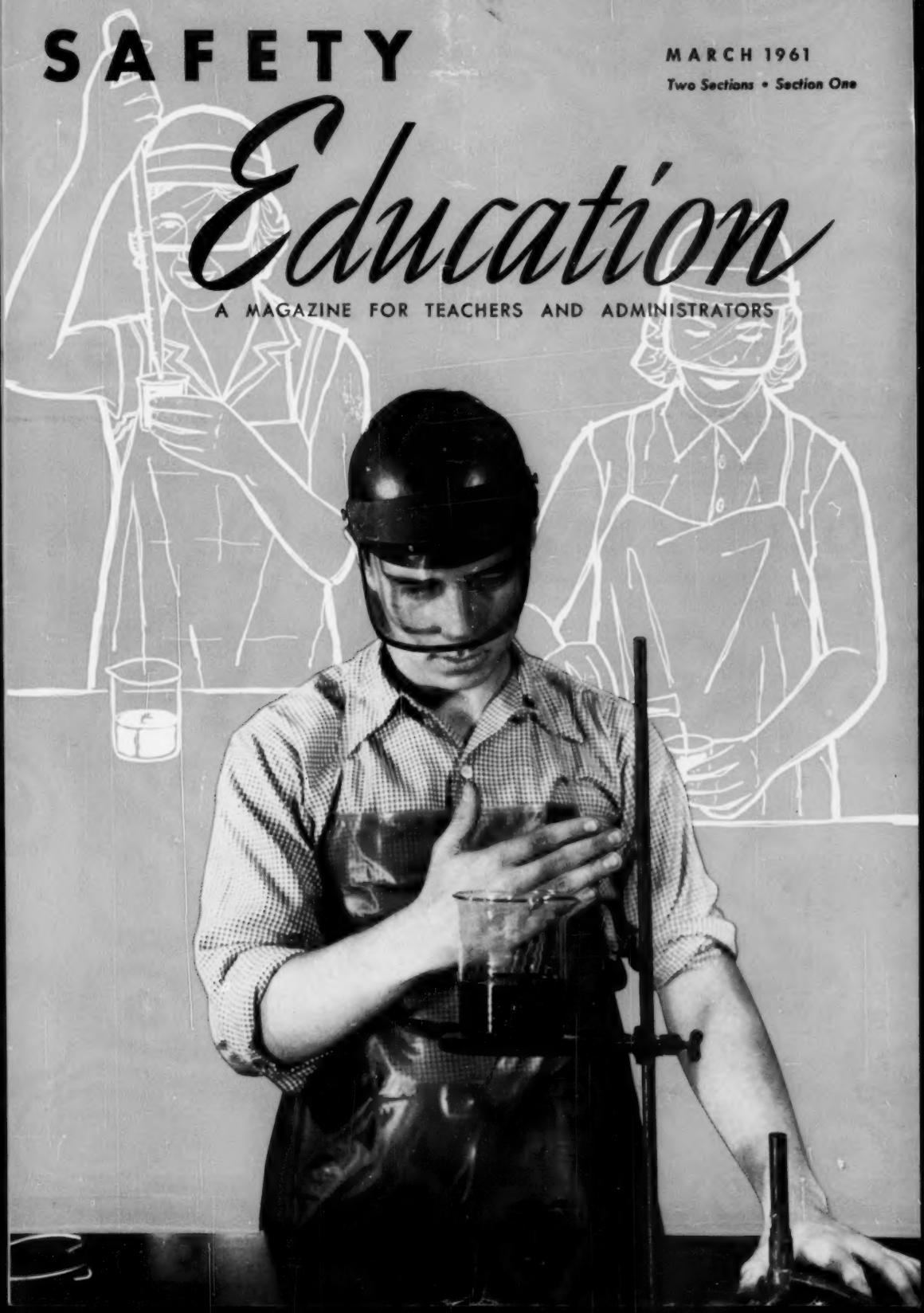
SAFETY Education

MARCH 1961
Two Sections • Section One

A MAGAZINE FOR TEACHERS AND ADMINISTRATORS



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SAFETY Education

A MAGAZINE FOR TEACHERS AND ADMINISTRATORS
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Features . . .

Departments . . .

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You're Not to Blame, But—

SCIENCE teachers have special problems these days.

Not only is formal science becoming more and more frequent in the junior high school, but the quality and comprehensiveness of the subject have increased as well. What used to be freshman and sophomore level science is now being taught in the seventh, eighth and ninth grades. This trend naturally brings the experiments, apparatus and chemicals into the inquisitive, eager hands of junior high students.

Only too often, one science experiment will produce ideas in young minds which lead to other experiments. The widespread sale of chemistry sets fosters more and more home experimentation. Here's when the science teacher's headaches might begin. The teacher probably won't be held directly responsible for home injuries or science accidents. But in view of the classroom ideas taught and stimulated, a conscientious science teacher needs to provide experiences which will develop a respect for safe science practices and will help his students be aware of possible dangers.

Factors other than increased science teaching are affecting the problem. More science is being printed in magazines and newspapers. Television programs show science experiments. Children's books on science are appearing in large numbers and suggest demonstrations to be done at home. All too often parents are unaware of the dangers or perhaps unaware of what their child is doing. Since the purchase of many of these things are stimulated by school science programs, it would seem that the school is responsible for developing safety rules which will carry over into science activities outside the classroom.

Eldon Scriven is supervising teacher, Junior High science-math, Northern Illinois University, DeKalb, Ill.

by Eldon G. Scriven

Science Series

If you're a junior high science teacher, you'll be exposing students to an exciting new area. And your stimulation may lead them to try a few experiments on their own at home. Such curiosity can be disastrous unless they have the proper background.

The excitement of the chase often results in loss of the game. So does the excitement of an activity lessen alertness and responsibility. A person must be alert and responsible in order to conduct the activities safely. If knowledge is necessary he must possess it; if familiarity of the activity is essential, have it; if skill is needed, use it. If these things aren't part of the individual's qualities, then this activity should not be engaged in until these things are acquired.

In a science laboratory with its many pieces of equipment, chemicals, demonstrations, experiments and student activities, safety rules and concepts cannot be taught generally at one time in a single unit. As the work unfolds, safety planning and teaching must keep pace with the changing activity. Materials which are used throughout the year may be an exception. Certain chemicals, for example, are used repeatedly. Acids would fall into this category. Glassware would be another. Fire, electricity and heat are others. A respect for these items must be learned early and with this respect should come rules for safe handling and use.

A junior high student probably has never used acids before, or Bunsen burners, or pushed glass tubing through rubber stoppers. The dangers of miss-handling are great. When I was a chemistry student, I saw a classmate break a glass tube while pushing it through a rubber stopper and it went into the student's hand. In another instance, boiling acid in a test tube sprayed over a student's clothes and ruined them. Safety teaching could have prevented these accidents.

The following rules cover items frequently used in a junior high science laboratory and should be taught early. Demonstration by the teacher should be done first, then repeated by the students.

When using fire, always:

1. Be sure a teacher is present.
2. Work on a surface which will not burn, such as asbestos or a metal tray.
3. Use safety matches. Strike the match away from you and before turning on the gas of the burner. Blow the match out and dip in water before throwing away.
4. Keep combustible material away from flame. This includes paper, clothing such as neckties, loose jackets, and hair.
5. Have a fire extinguisher which every student knows how to use. If not possible, have a pan of water ready in case a fire should start.
6. Be sure the Bunsen burner is regulated properly before lighting. Instruction in the correct use of a Bunsen burner should be given.

When using dangerous chemicals:

1. Be sure a teacher is present.
2. Be sure there is plenty of room to work. Make sure other students are alert to your activity and a safe distance away. Students should NEVER crowd behind the demonstrator or look over his shoulders.
3. Know what to expect from their use. An unexpected reaction may result, throwing them on the demonstrator or bystanders.
4. Look at the labels before using. Be sure you have the right chemical.

When using acids, always

1. Wear protective aprons or old clothing which cannot be ruined by acid holes.
2. Keep the acid container in a safe place where it cannot tip over or be hit accidently.
3. Remove the stopper from the container carefully and hold it between the knuckles of the hand or place it upside down in a place where nothing will touch it. *turn page*

4. Pour the acid into a container held over a sink or large pan.
5. Refrain from smelling the acid directly since some acids vaporize readily and can be dangerous when inhaled.
6. Be near a faucet or large supply of water so that any acid which may get onto your skin can be quickly washed off.

When using glassware, always

1. Handle each piece gently. Some glassware used in science is very fragile and can break with little pressure.
2. Be sure the glassware is clean. Residue from previous use may be drops of acid or other dangerous and poisonous chemicals.
3. Hold test tubes away from you.
4. The mouths of test tubes should never be pointed toward a person. Test tubes having small diameters will often spew forth materials as a result of boiling, combustion or other chemical change.
5. Look at the materials glassware may contain through the sides of the container. Never look into the open top.
6. Use a dust pan and brush to pick up broken glassware. Never handle with bare hands.
7. Use wet paper toweling to gather up fine splinters of glass.
8. Throw broken glass into special containers —never into wastebaskets.
9. Lubricate the glass tubing with water or other substances before putting into a rubber stopper. Turn the tubing back and forth as you force it into the stopper. This will prevent snapping of the glass. Wrapping the tube with cloth or paper lessens danger.
10. Wrap glassware in paper or cloth when using it to generate gases or when breaking it to release the results of certain experiments. This will prevent flying glass which could injure someone.

At various times, other materials will be used which are potentially dangerous. Respect for these dangers must be developed among the students. With this respect must come safety rules which are demonstrated, taught and retaught when used again:

When tasting anything, you should always

1. Know what you are tasting and any hazardous properties. If there are dangerous properties, don't taste it.

Watch your aim when heating chemicals. Teach students to point test tube away from themselves and observers.

2. If you are told to taste something unfamiliar, follow this procedure:
   a) Put a small amount on the back of your hand. If burning, warming or irritation results, don't taste it.
   b) If burning, warming or irritation doesn't result, touch the material cautiously with your tongue.

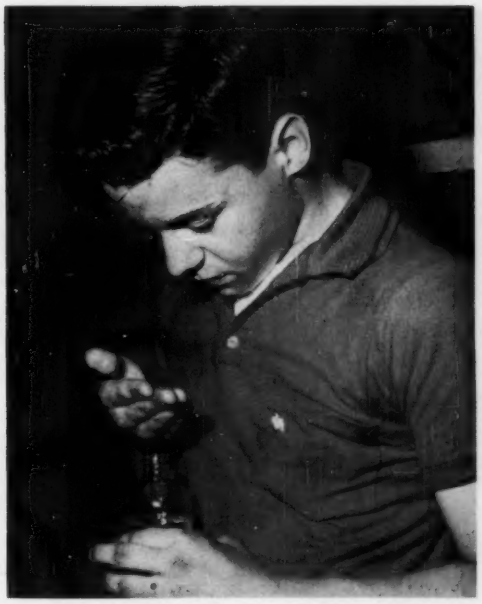
When using electric equipment, always

1. Avoid touching any bare wires.
2. Hold the wire where there is insulation when making connections.
3. Avoid touching the equipment with metal objects when it is connected to a source of electricity.
4. Avoid shocking a person with electricity even though the shock is a mild one. Some people may have physical conditions which are affected even by mild electric shocks.

When smelling an unknown liquid or gas, always

1. Sniff the material cautiously.
2. Wave your hand back and forth over the opening of the container while sniffing. This will mix the vapor with air preventing a

When tasting unknowns, first test on back of hand. If no burning or irritation results, taste chemical cautiously.



To smell unknowns, fan air over container while you sniff slightly. Stop if you feel a burning sensation.

concentration of the material from reaching your nose.

3. Cover the container immediately if the vapor burns, stings or irritates the lining of your nose. Some vapors can burn the linings of your nose, throat and lungs.

When observing strange animals or plants in the classroom or on a field trip, always

1. Avoid picking up or touching them. Use a jar, a box or paper sack and put them into the container by using a stick, trowel or some other suitable instrument.
2. Put them in a suitable container if you wish to keep them permanently. Place the temporary container into the permanent container before releasing them. Open the container, remove the animal and close the cage quickly.
3. Find the name and proper care of the plant or animal as soon as possible. Safe handling can only result from knowing the identity of your find.

Units on astronomy, space travel and chemistry often lead to an interest in science-type hobbies which are conducted out of school. A popular area at the present time is that of experimentation with rocket building, rocket fuels and subsequent experimental rocket firing. To an embryonic scientist, young in years, knowledge, understanding and skills, these hobbies can and have proved fatal.

The science laboratory safety rules must be taught well enough—must become a part of the student to such a degree—that they will be followed in all science activities wherever they occur.

A science teacher upon becoming aware of dangerous science hobbies of his students should direct them into science safety material which they can follow. Parents should be contacted and cautioned about potentially dangerous science hobbies conducted by their children. The most dangerous home science hobbies are commercial science experiments, kits and rocketry. Here are some safety ideas which will help a science teacher discharge his responsibility in this area.

1. Follow directions. Do not experiment beyond what the directions give unless you are sure of the results.
2. Learn the chemicals involved. Know their characteristics. Do not mix them with other

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Ramps and grab bars along corridors are essential features for schools with handicapped children.

Designing

by Ray Graham

Are your classrooms and your school as well as your teachers really safe for exceptional students?

Second of Series

ONLY a few years ago two very contrasting events took place.

In a large midwestern city a disastrous school fire resulted in great loss of life. This event monopolized newspaper headlines for over a week.

At about the same time there was another fire. It received no publicity other than in a few local papers. This first destroyed a huge dairy barn operated by a state school for mentally deficient children. The boys who worked on this project were in their late teens or early twenties. They had been so carefully trained and drilled for just such an emergency that when fire broke out that night at about 2 a.m., this trained crew of mentally retarded boys responded to the alarm, hurriedly dressed and went to their appointed stations and tasks. The entire prize herd of 112 cattle and a number of calves was taken to safety. Some of the calves had to be carried.

This school and these retarded boys demonstrated several important things: (a) safety is largely a matter of careful planning and training to meet the hazardous conditions that may develop; (b) handicapped individuals need more than an average amount of training in these respects; and (c) the safety of handicapped individuals is closely related to physical facilities of buildings.

A leading school architect was recently employed to design a building that would house 20 regular classes of elementary pupils and three or four classes of handicapped children. He made an extensive study of the problem and at the dedication of the building said, "Building adequate facilities for the handicapped could almost be classified as an area of specialization in itself."

Ray Graham is director of special education, Illinois Department of Public Instruction, Springfield.

Photos courtesy of the Chicago Public Schools.

for the Handicapped

General safety considerations

Before discussing safety features in school buildings that are to house handicapped children, a few general observations should be discussed.

▸ The principal and teachers are the key persons. *Children do not think like adults.* To handle an emergency, adults must have thought out every possible factor long before, so that correct safety procedures will be followed. Every type of possible emergency must be thought of and prepared for in advance. Many extra drills must be held.

▸ Crippled children cannot move rapidly. Some will be in wheel chairs, some will have braces and crutches. Some may be belted in their chair when an emergency arises, or they may be fastened in a stand-up table. Blind children have a particular problem in moving any time. Deaf children may not hear the alarm. Mentally handicapped and emotionally disturbed children do not always hear, interpret or respond to directions satisfactorily. In buildings where normal children are housed, rapid movement of the regular classes may result in crowded corridors and exits, jostling, pushing and excitement, making the safe exit of the handicapped children extremely difficult.

▸ Fire and smoke dangers do not always originate in the school building. In a recent incident, fire broke out on the roof of a building nearby. A strong wind blew the heavy smoke into the school, necessitating immediate evacuation.

▸ Unusual care must be given to unusual situations. Fires are not always so obliging as to break out when all the children in the class are with their teacher. A child may be in the toilet. The teacher may be on the playground with some, while others are in the classroom. A child may be resting on a cot in another room. In integrated programs some children may be in several other rooms. (This will complicate the problem for both the special teacher and regular class teachers.) A serious problem may result on days when a substitute teacher is with the class.

▸ A first item of safety for handicapped children should be in recognizing that cheap construction, cutting costs by using inferior materials may be the difference between hazards and security. It is worthy of note that in many places there is a willingness to place mentally handicapped children in buildings that have been discarded for regular classes. This is much more common in private than in public schools because in many states there is little or no regulation of private schools.

Housing Handicapped Children

A long list could be made of specific types of conditions that need to be considered and of special plans needed for children with handicapping conditions. However, no one list would apply to all buildings, programs or types of exceptionalities. Therefore, each school must carefully study its own problem. The following should be helpful in beginning such an evaluation and planning.

1. Thoroughly study the immediate neighborhood. Are there large or small buildings across from the school? Are they fire hazards? Is the school building close to the sidewalks? Are the sidewalks narrow or wide? Is the building on a busy street?

2. In case of emergency in cold or inclement weather, where would handicapped children be taken for shelter?

3. Many things need to be kept in mind about caring for children after they have left a building in time of danger. Some may become ill due to excitement and other causes. Some may be injured in the process of evacuation. I know of one teacher who keeps a list of names, addresses and telephone numbers of all parents in her purse at all times so she

can call in case of an emergency. The addresses and telephone numbers of hospitals and physicians should be posted near telephones.

4. Every teacher should be thoroughly acquainted with the school building. The usual exit might be blocked by fire or smoke. She must know alternate exits. Where are the fire extinguishers on your floor? Do you know how to use them? Is there one in your room? How are alarms given and by whom?

5. Know and practice all emergency procedures, such as: keeping windows closed, how children protect their breathing in smoke-filled corridors, and what to do if children jam the corridor.

6. Give special attention to certain physical factors in buildings housing handicapped children. Some buildings have ramps (outside and inside) and elevators. These may represent hazards at times: an outside ramp may become slippery. Or an elevator may be depended on so much that, if it doesn't work, or isn't available in time of crisis, other means of evacuation must be found. Pre-planning and practice for such emergencies may make the difference between safety and hazards.

Entrances and exits are especially important. A wheel chair may have difficulty in a usual sized door. Strong, fast, automatic doors could catch a crutch and throw a child. Steps are a hazard to every crippled or blind child. Railings on both sides of every stairway (even for one, two or three steps) are essential for handicapped children.

In some schools there is a tendency to put special education rooms on second or third floors, in basement rooms or at some other undesirable location. These locations can be hazardous for the usual movement about the building (going to other classrooms, the nurse's or principal's office and rest room) as well as for emergencies. Whenever possible, these rooms should be on the ground floor and close to exits and entrances. Proper illumination of classrooms and corridors also is quite important for the safety of handicapped children.

7. Safety for handicapped children begins with the selection of the classrooms. A small room for any group of handicapped children is always a major hazard. Crowded rooms, narrow aisles and congested conditions may be as hazardous as doors that stick. Deaf children could trip over cords from hearing equipment. A child on crutches or in a wheel chair needs twice as wide an aisle for easy movement as a non-handicapped child may need. Crowded rooms often result in furniture too close to doors.

The fallacy of thinking that a small number of children can use a small room results in hazards. A room for 10 to 15 handicapped children should be no smaller than a regular classroom for 30 or more non-handicapped children.

Because a special class usually has children of different age-grade levels with varying degrees of handicapping conditions, there are great variations in curricula materials. A special room lacking adequate storage facilities often becomes a storage depot or a warehouse. Wheel chairs, crutches and other equipment may be hazards. Projects develop slowly with handicapped children, and thus great accumulations of materials may result. If there are good housekeeping practices and adequate storage facilities, the danger is minimized. However, it is not difficult to find special education rooms where the teacher and class become "hoarders" of materials—some of which are actually useless.

From the standpoint of safety as well as adequate programming, at least 50 square feet per child should be required in an average room

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At Neil School in Chicago, bus unloads from rear onto platform, which is covered to protect from ice, snow.

Birth of a Lesson

by James W. Mann and Rosemary Beyer

CAN the same safety education materials be used in classrooms all over the country? Can such material be prepared to suit the differing levels, needs and interests of the children? Is it possible to cover all the essential areas; to keep the lessons "at grade level" but without technical flaws?

We believe it is if, and this is a big IF, the teacher helps the pupils to personalize the material in terms of his own needs, interests and abilities. That is why the writing of the elementary school safety lessons for SAFETY EDUCATION is a three part process: 1) writing, 2) using in the classroom by a teacher with children of varying interests and abilities and 3) revising in light of this experience.

In order that you, the teacher, may use these lessons most effectively, you will want to know the steps in their construction, the reasoning back of the decisions and the method of tryout.

We begin with a master list of concepts. This is not difficult because we have, in addition to our experience with children, the materials from the National Safety Council and from numerous community and private agencies promoting safety. The list includes such familiar items as recognizing, understanding and conforming to traffic signs, street markings; using playground equipment properly; adapting to the hazards of weather, holiday and vacation activities; fire prevention and fire drills; and preventing accidents in the school building and at home.

The list of concepts must, however, be scrutinized continuously for changes in the child's environment. For example, it's no longer sufficient to teach children to recognize and use the green, amber and red of the conventional traffic signal. They must also learn to recognize and follow the newer *Walk* and *Don't Walk* (and who knows what additional local variations of traffic control).

Other problems are the variations of conditions from one environment to another: the hazards of climate vary from the North to the South; rural areas present problems different from urban; and cutting across these considerations is the extreme mobility of our population today. Thus we educate for safety, not only according to areas, but also against the contingencies of travel and re-location of families.

Once we have agreed upon the list of concepts, we come to the educational problem of how to convert objectives into learnings which produce the results we seek. It is not enough, for example, to *know what* constitutes a safe *bicycle*, to *know how* to ride a bicycle safely,

James Mann, author of the elementary school safety lessons, is the principal, and Rosemary Beyer is a teacher at Hubbard Woods School, Winnetka, Ill.

or to *know when* it is not safe to ride a bicycle at all. We must help children to *act* in the light of their knowledge and understanding—to *use* facts intelligently for their own protection.

Here we look to our knowledge of how functional learning takes place and attempt to construct teaching materials with this important factor in mind. We must recognize the importance of providing for experience, both as a learning factor and as practice for habit formation. We must remember that the younger the child, the nearer to the experiential level he operates. We must know when we can safely begin to substitute pictorial material for experience and how soon we can depend upon the ability to intellectualize as a safe teaching device.

Lessons suggest activities

We must also remember that thinking must accompany experience, even at an early level, but cannot replace it. This limits the use of paper and pencil exercises and of discussion at the early levels, and indicates that materials provide suggestions for activities and experiences appropriate to the age group in question.

To illustrate: First grade pupils learn how best to use cross walks at intersections, not by reading, discussion or even pictures, but by going to an intersection and walking "between the white lines." Modifications of this procedure grade by grade will eventually find older pupils able to grasp the concept by reading instructions or discussing a diagram of an intersection. We must, however, always provide some feeling of personal participation in learning safety practices.

We may extend the idea of participation in learning by including emotional content in safety teachings. Children must *want* to act in ways that safeguard their welfare. They must experience satisfactions when they act safely and use good judgment. This comes not through fear of consequences or threat of punishment, but through positive acceptance of a sensible and satisfying way of acting and living. This is a part of growth toward maturity.

This also provides a basis for another task of teaching—that of projecting child-learning into comparable areas at the adult level. The child bicycle rider is performing a real child-like activity; at the same time he is in training for adult automobile driving. Materials for teaching safety must pointedly include similarities where they occur. In safety learnings we must consciously work for transfer through use of common elements and utilize the challenge of being "grown up."

Now the lesson is ready to try out in the classroom. What does the teacher find out? First we have probably included too many concepts. In order to assist a teacher to make the material come alive, each section should develop only one or two concepts. After all, the written material can be only a summary or outline of the idea to be developed. Since the lessons need much discussion and, in the lower grades, activity and experience, obviously it becomes difficult and often impossible to develop properly several concepts at one time. Either the teacher must come back to the material several times after appropriate background has been developed, or she proceeds with inadequate consideration of each idea presented, thus defeating the purpose of the material. For this reason, the number of concepts is reduced.

To be most useful, the content should be as universally applicable as possible, leaving to the teacher the job of adapting to local community conditions. If the "try-out" teacher cannot adapt the content, it is modified.

Keyed to their grade level

The content should be keyed to the level of the child; i.e., first-graders should be concerned with basic rules of safe walking and safe riding in passenger cars; bicycle safety may be added at a little later date.

Vocabulary, also, must be carefully controlled. For the younger children it must be simple and direct, without ambiguities, using many illustrations. Written directions should be kept to a minimum. Try-out quickly shows any non-functional vocabulary.

The ideas on a page must be grouped in some fashion apparent to the children. Often this can be accomplished by using lines to separate areas. For the early grades, there should be less printed material, larger print and wider spacing. Illustrations should be as large as possible, particularly when they are to be colored.

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BULLETIN BOARD

"Drunk" teenagers

Glue sniffing is a dangerous new teenage fad according to Michigan State Health Department. In East Lansing some junior high school students reportedly were sniffing the glue used for model airplanes to make them light-headed and groggy. An additional danger is that the ingredients in the glue could cause damage to the bladder or kidneys.

Royal support

The Prince of Wales has won his badge—for cycling safety. This announcement was made at the congress of the Royal Society for the Prevention of Accidents. By passing a course at Cheam School on cycle maintenance and safe cycling, the Prince received his ***National Cycling Proficiency Certificate and Badge.*** Officials said: "This token of Royal support is a conspicuous landmark of encouragement . . . for greater cooperation in safe cycling."

No parking for hazards

Students at Woodside High School, Palo Alto, Calif., must submit their cars to a safety inspection before parking them on school grounds. All defects must be corrected before students are issued a parking permit. The California Highway Patrol helps in the check, which was originally held during the first week of school and repeated for cars missing the inspection.

Start them young

With the new year came a new program in the nursery schools of East Orange, N. J. The youngsters are beginning a three year course in traffic safety at the nursery school level. Officials said, "This is the time to develop in the youngsters--the right attitude toward traffic safety."

Watch out cyclists

Police will now be ticketing all bicycle violators in Anaheim, Calif. When negligent, the cyclist is stopped, citation written and a letter sent to the youth's parents. For three violations, parents are asked to report with the child to the police station to review infractions and decide what action should be taken.

The Meaning of

If a child is to build a healthy attitude toward safety, he must have some understanding of injury and death. How does one help him acquire such insight?

Some suggest that parents stand by and allow the child to hurt himself to understand what it means to be injured. However, it is our belief that a child's slight, and almost inevitable hurt, may be used to develop this needed understanding. The death of a pet, grandparent or neighbor may furnish the blueprint for building a safety attitude as it involves death.

Although these occasions are never planned, the sympathetic and understanding adult may be able to use such experiences to augment the child's growth in comprehension at these times.

This true experience, sent in by a reader who has asked to remain anonymous, illustrates the child's capacity for creating his own curriculum in this regard.

ACROSS the street as I shoveled the snow were five year old Barbara and her two big brothers engaged in the same task. "I'll come over and help you, if you want," called Barbara. And so we two "women" shoveled away until the walk was finished.

The next step was getting the calcium chloride to sprinkle on the icy spots. We called to the boys so they would know where Barbara was and, as we entered my home, Barbara said: "I've been here before. I came on Halloween."

Yes, she had been here on Halloween I well remembered. Less than a week after the funeral. But little ghosts, imps, gnomes and witches know nothing of death so the light was on the porch, the jack-o-lantern in the window, a long table filled with apples and nuts, doughnuts and candy and Mother in her big chair reviewing the parade of little costumed figures. Barbara's voice brought me back to January.

". . . My uncle died yesterday," she was saying.

"Oh, Barbara," I replied. "I am so sorry. Was he your mother's or your father's brother?"

"He was my mother's brother," Barbara continued. "He lived across the street."

Conscience-stricken that tragedy had passed the neighborhood without my knowledge, I asked which house. "The one with the three windows," Barbara said matter-of-factly. Quickly my eye searched the houses "across the street" and saw none with three windows. Only much, much later did I remember that ours was the house with three windows.

"Yes," Barbara continued. "He was in bed but they just gave him a drink of water and he died. Grandma didn't die though. She just sits in her chair and looks and looks."

Just then the doorbell rang and it was one of the big brothers saying Barbara must go home.

"Barbara tells me that your uncle died," I said.

"Oh, no," replied the 11-year old, "It wasn't my uncle. It was my grandfather. And that was before I was born."

Confused I glanced at Barbara to see what signs she was showing that her "deception" was uncovered. But with apparent complete uncon-

Death

sciousness of anything out of the way she was looking up at her brother and saying again, "I've been in this house before. I came here on Halloween."

And suddenly it was no longer a memory—I was there—standing at the front door—inviting the boys and girls in, showing them the laden table, asking them to step in and show their costumes to my mother and, as Barbara came to leave, seeing her young blonde mother waiting for her in the shadows. A whispered conversation:

"I am so very sorry. How is your mother taking it?"

And my whispered reply: "With great courage. She inflicts her grief on no one but we know because she sits in her chair not reading, not talking, just looking."

Yet, here was Barbara on this cold January day two and a half months later. Was she lying? Never! Was she playing? Playing, perhaps, but only if considered role playing.

I prefer to believe that Barbara was working out her own curriculum. Curricular task—to learn the meaning of death.

Barbara was "experiencing" death. She was "being" me. My brother was her uncle (grandfather), my mother, her grandmother. She had integrated bits of this and that relating to death and, much as a novelist does, arrived at an experience which for her was real.

Barbara is five. The wonderful curriculum which she has been planning and living for herself will soon be superseded by one which society has planned for her. May I express a fervent hope that society allows her now and then to plan her own curriculum directly fitted to her needs.

Society could work long and hard to get a better safety experience than this one, little Barbara, planned for herself●

Bats Can Carry Rabies

RABIES from bat bites is now a recognized danger in many parts of the United States. Cases have been reported from Florida to Pennsylvania and New York and from Texas to California in metropolitan as well as rural areas.

Vampire bats cause most cases of the disease. Because they confine themselves around Latin American countries with their northermost range about 100 miles south of the Mexican border, bat rabies was not considered a danger in this country. However, bat rabies cases in Florida and Pennsylvania have involved the common, native insectivorous varieties, according to an article in *Health and Safety* magazine. In the past six years, bat rabies has been confirmed in more than half of the states—around the Gulf of Mexico and also the Great Lakes area.

Rabies may be contracted by nearly all warm blooded animals from the saliva of an infected animal. Wounds usually heal, but the virus continues through the victim's nervous system to the brain. Dog rabies inoculations have cut down the incidence among household pets. However, there is no similar immunization for humans. Attacks are fatal unless victims undergo dangerous antirabies vaccine inoculations—14 daily shots which may produce serious reactions and side effects. Besides dogs and bats, the disease is most frequently carried by foxes, chipmunks, mice, raccoons and skunks.

To avoid possibilities of rabies, remember these precautions:

- Stay away from any wild animal behaving abnormally.
- Any bat on the ground, unable to fly well or flying in the daytime is abnormal. Don't pick it up or go near it.
- If anyone is bitten by an abnormal animal and the animal can be secured safely, send it to the local or state health department of the Public Health Service for examination. Be careful to preserve the head, since the evidence is in the brain.
- In any case of a wild-animal bite, report it to the health authorities. If rabies is involved, this report is as important as first aid.●

by James S. Keller

Handling Problem Parents

If they complain, put them to work. You'll be amazed at what parents can do. And with your help, baffling problems will be solved with ease.

GOOD morning, *your* safety council." The receptionist in the Metropolitan Safety Council had no idea that morning three years ago that this call would be so different. She had no way of predicting its eventual impact nor did she know this call would set a pattern for months to come. This was the beginning.

"We have a problem at our school," the voice on the other end said.

Since this remark is not unusual in a safety council office, the problem was handled in a more or less routine manner. Referrals to the proper experts were made, and it seemed like just another small service. A few days later, a similar call from a different school. A week later another and another and another. "What can we do to solve the traffic problem around our school?"

Each problem was a little different, but all had a common pattern. Schools in the metropolitan area were concerned about the hazardous confusion around their school at convening and dismissal times. Some were decrying the high speed traffic; some the lack of adequate signing and signalization. Others complained about irrigation ditches, parking hazards, lack of sidewalks and roads, unsafe bicycling, horseplay in the streets.

But almost without exception, they echoed a common problem: parents were complicating the hazardous situation by double parking, speeding, parking in "No Parking" zones, urg-

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ing their children to cross in the middle of the block and countless other direct violations of law and common sense. Could something be done?

Were the individual complaints of a growing number of schools throughout the metropolitan area the immediate concern of the safety council? A survey by the Denver Police Department had just shown that the largest percentage of traffic accidents involving children occurred in the vicinity of the home, rather than around school. Could the council justify a major program in the schools with this evidence on record?

The answer was found in further studying the police department's findings. According to the report, the parent's failure to reemphasize school safety lessons was the underlying cause of these student accidents around the home. It became evident that students were far more cautious within sight of the school. The farther they roamed from school, the more their alertness waned. Until, by the time they reached home, the safety lessons learned at school were almost forgotten.

The School Safety Committee had recognized the problem — lack of parental responsibility. Something had to be done to reach the parents.

Mrs. Alice Dickinson, chairman of the Council's School Safety Committee, (now vice president of the Colorado Congress of Parents and Teachers), called a meeting of the county PTA and PTL presidents and safety chairmen. She explained the problem and asked their help in developing a school traffic safety program. A working sub-committee was appointed and the endless rounds of meetings started. It was now June. The program had to be in final form by the end of August.

It was immediately recognized that the success of the program depended on the cooperation of school administrations, local PTA presidents and school principals. The school administrations were especially important. As each section of the program was developed it was reviewed by top school officials. In Denver the superintendent of schools set up a special committee composed of principals, teachers, the director of safety education, a representative of the police department and a member of the traffic engineering department. Each time this group met, major revisions were suggested.

Although the committee had a general idea about the major problems confronting each school, they felt any program removed from the immediate problem location could not be as successful as one developed on a local school basis.

The safety council's role would be one of suggestion and aid. The committee limited participation in this program to elementary schools for two reasons: 1) The problems were more important according to established records, 2) The scope of a new project should not be so

large that it could not be adequately developed, programmed and followed through.

First the problem had to be determined. What was causing the accidents and what hazards existed. In the program materials kit the committee included a general method of determining the hazards: a simple checklist which could also be used as a follow up. Two program evaluation sheets were included in the packets. On these sheets the safety chairmen were to summarize the effectiveness, value and impact of their program; and if necessary indicate any changes from the original plan.

Seeking own solution

After the problems had been determined, the local PTA could then set out to correct the deficiencies. This solution in each school would be different.

The third step was the most important. After the solution was devised, it had to be worked out. This action part of the program must be continuously evaluated and reevaluated in light of accomplishments aimed at the specific problems.

The program was introduced to the local PTA's at their annual school of instruction early in the Fall. Each county council was held responsible for developing motivation and interest on the local level. Committee members and the council staff explained the program in each county.

A simple method of reporting was developed. Each school wishing to participate in the program first mailed a post card (included in the kit) to the safety council. This card, which carried the signature of the local PTA president and the school principal, stated that the school would do all possible to eliminate the hazards around the school. Of the area's 300 elementary schools, 110 returned the cards.

Local groups were then asked to submit a detailed explanation of their problems. In this report they were asked to substantiate their problems with diagrams, pictures, maps and other reports that would indicate the true nature of their problem.

Each school was asked to outline their plan for solving their problems. This report material was to include all educational material developed, a proposed timetable of accomplishments, and in general who they were going to use; what, where and why they would do it.

As anticipated, the majority of the problems hinged on the lack of parental concern. Most of the schools felt that parent educational programs should be established, and did so. In some locations education was not enough. When educational programs did not produce the desired results, they asked for enforcement of school zone laws and ordinances. In one school alone 24 parking tickets were issued to parents in a single week. Local police, sheriff and state patrol offices were flooded with requests for help in specific cases. Traffic engineers were requested to survey many problems. Their time was gladly given because the problems had been thought out and a real need had been proven.

While all this was taking place, the committee was meeting twice a month and the council staff was speaking to various PTA groups about three times a week. Articles were appearing in newspapers. An awareness was being achieved. The committee estimated that well over 100,000 area residents were in some way reminded of their safety responsibility. Most were parents—ones the council had been trying to reach.

Stepped up safety education

In addition, the school safety education programs were increased. PTA organizations were working more closely with public officials than ever before. School administrations, especially in the suburban communities became more conscious of designing safety into their school grounds.

In one community the efforts of the program succeeded where everything else had failed. For years the National Safety Council's Inventory of Traffic Safety Activities had recommended a one-way street ordinance to facilitate the flow of traffic. Repeated efforts at passage were futile until the parents at one school were able to prove the need. Soon after, the city council enacted the ordinance.

People in Denver were somewhat vague about the meaning of the "No Parking" signs in front of schools. Some thought they meant "loading zones." Some felt they were "parents waiting zones," and some even took the liberty to use them as double and triple parking zones. When asked to clarify, the police traffic divi-

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Traffic or sports?

you only THINK you know

by Henry A. Vaughan

GUESSWORK should not be tolerated! The administrator must be informed on those things that constitute the greatest threat to the safety of his students. Because teachers and other staff members of a public secondary school largely control the environment, they should be instructed and made fully cognizant of the accident problem in their areas.

Unfortunately, this is not always the case. In a study we made, facts proved that, in many instances, we are not conscious of the most dangerous things in our environment.

We surveyed the secondary schools in Oklahoma to ascertain what the administrators feel are their most acute safety problems. We received an 80 per cent return. As would be true of any study, some problems came to light that were wholly unanticipated. However, there is no doubt that all replies were made in the light of experience, as that experience could be recalled. It is the total of these possible experiences that is considered first; the actual experiences to be dealt with secondly; and then a comparison of the two.

One hundred fifty-four replies reported that the number one problem was that of students driving automobiles to school. This reply is understandable since any auto accident is likely to be more serious than some other problem. Eighty-four reported that cars driven by others in the immediate vicinity of the school constituted the number one problem. This probably would have been expected had the study been restricted to elementary schools. But it comes as a surprise for secondary schools.

Using the method of counting number one as four points, number two as three points, number three as two points and number four as one point, cars driven by students to school totaled 977 points. Cars driven by others in the vicinity of the school accounted for 777 points. Basketball totaled 358 points and football rounded out the four leading problems with 336 points. Tornadoes, school bus transportation, motor scooters and others received a smaller number of points.

Let me emphasize that the above responses are based on what the administrators considered their number one problem, in many cases without consulting records. In other words, these constitute an off-the-cuff opinion. This probably reflects some of the fears of the individual respondents.

In another part of the questionnaire the following questions were posed: "Has there been a 'school connected' accident causing death, at *your high school* in the last two years?" and "To your knowledge, how many high school students have received *hospital care* because of accidents that were 'school connected' in the last two years?" Respondents were asked to explain any affirmative answers.

From the answers to the above questions comes the justification for making a comparison between the two. Football injuries needing hospitalization far exceed any of the others. Football, for the two years included in the study, had 563 hospitalization cases and all of the others combined had 519 students hospitalized. This would appear to be very significant. We certainly don't mean that football should be eliminated any more than all peach trees should be eliminated because boys fall out of peach trees and break arms. But if football is this kind of threat to the safety and welfare of youngsters, it is time that the problems are met head on to reduce the rate of injuries. Safety edu-

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cation is needed within the ranks of the people coaching football.

The school connected accidents in the state causing death are alarming. Seven of the 11 deaths in the two years were traffic connected. But they were also closely related to something else:

- one was a student leaving a school bus;
- one was killed on the way to a ball game;
- another was killed in an automobile-train accident while advertising a school play.
- two deaths were in athletics, one in baseball and the other in football.

Claimed to Be Most Important Problems

Cars driven by students to schools	154
Cars driven by others	84
Football	48
Basketball	30
Tornadoes	16
School Bus	11
Motor scooters	11
Athletic dressing rooms	6
Stairways	4
Baseball	4
Fire hazards	4
Physical education classes	3

Actual Injuries Requiring Hospitalization

Football	563
Basketball	179
Playground	70
Traffic	66
Physical education classes	50
Baseball	37
Glass doors and building	24
Carbon monoxide	20
Shop	16
Falls	14
Playground equipment	12
Stairways	11
Track	5
Softball	4
Printing Press	3
Roller skating	2
Motor scooter	2
Tumbling	2
Science laboratory	1
Choked on peanut	1

- one death was caused by a gun accident in the rehearsal of a school play.
- one death by drowning at a school picnic.

Many solutions were offered for the various problems and it is indeed interesting to note the many suggestions. Since automobiles driven by students to school was selected by the schools to be the most acute problem, the following solutions were offered:

1. Assign parking spaces, make frequent checks and require that cars remain parked until school closes in the afternoon.
2. Emphasize the need for taking driver education.
3. Use the guidance and counselling personnel to get at the root of the problem.
4. Conduct safety assemblies.
5. Secure a better spirit of cooperation between school and city officials.
6. Get the outstanding athletes (who usually set the standards) and other student leaders to set the pattern in driving.

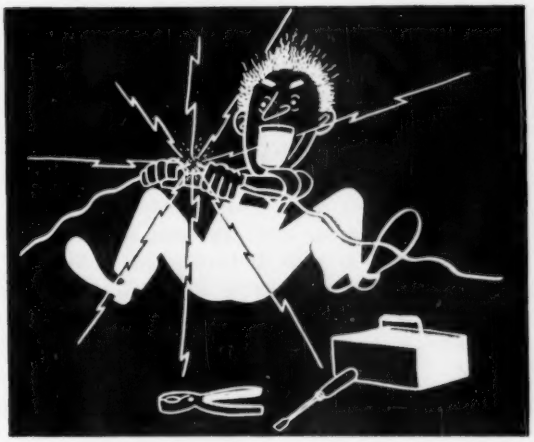
Some solutions offered to cope with the real number one problem — that of football — as shown in the study are:

1. The school should buy better football equipment and keep the equipment in good condition.
2. All players should be kept in tip top physical condition.
3. Fundamentals of football should be taught more effectively.
4. Self-protection should be drilled upon much more than it is at present.
5. Better trained coaches should be hired.

All of the problems mentioned are important and cannot be slighted, but some are of greater importance than others. While the one problem feared the most (students driving automobiles to school) is potentially a serious one, the one that is doing the most damage (football) is left, in many instances, unnoticed and untouched.

A compulsory statewide accident reporting system is needed whose results will tend to keep the problems ever before the schools. A safety education program is impossible without the facts concerning the students' environment. And, it's impossible to have all the facts about accidents without a rigid, uniform reporting system that brings together valid information●

How not to get shocked



Teach your students and their parents how to outfit their electric equipment so that stray electricity will flow to the ground and not through their body.

EVERY time you switch on the TV, use the electric hedge clippers, plug in the electric saw, pull clothes from the electric washer or dryer, you flirt with electric current that could give you the jolt of your life.

Chances are slight that this would happen, but it *could* and *does* regularly. Some typical examples:

A Texas college boy on vacation was electrocuted while using a vacuum cleaner to remove debris from the family swimming pool.

A Chicago teenage girl died of shock when she simultaneously grasped a floor lamp and rubbed her toe against the metal cabinet of an operating television set.

A Florida do-it-yourselfer was fatally shocked when the electric drill he was using developed a short circuit.

How can you prevent a similar accident from striking your family? One precaution you can take is to ground your electric equipment. This is done by providing equipment with a third "safety" wire which will divert a maverick current—should one develop—harmlessly into the ground.

The reason for grounding is this: an electric current has a natural compulsion to flow to the ground. In doing so, electricity could pass through your body, if you are in contact with

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Material for this article was prepared by the Mechanical Safe Guarding Committee of the Industrial Conference, National Safety Council.

a defective electric apparatus and standing on a noninsulating surface such as earth, cement, metal, or touching a water pipe or other ground material which will provide a path for electricity.

To illustrate: Mrs. A., an Illinois housewife, uses an electric coffee maker which has a small piece of plastic broken from the end of the plug on the power cord. That defect, like others such as a frayed cord, can cause a severe shock. As long as Mrs. A. handles the coffee maker and keeps the rest of her body from contacting a good ground, she is relatively safe, because the electricity has no path to the ground.

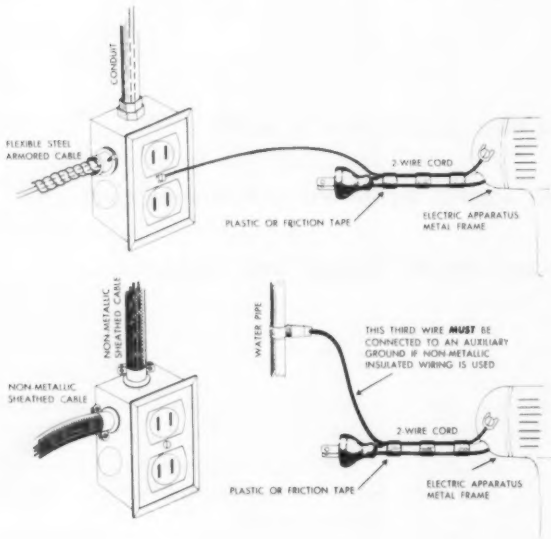
It could be a different story if she touches the sink, stove or water faucet while holding the defective part. An electric circuit would be formed and would flow through her body causing severe injury, burns or electrocution.

Some equipment, especially washing machines, dryers, dishwashers, air conditioners and large power tools are manufactured with three wires reducing the shock hazard. Always look for that feature when purchasing large appliances.

However, some electric equipment which should have the third ground wire may not. It may be necessary for you to install this wire or have it installed.

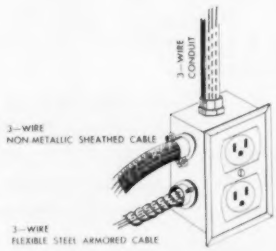
How you ground your equipment depends on the type of wiring in your home. If your

Ways to ground yo



To fit a conventional two wire apparatu with a third ground wire, connect a 1 or 16 gauge flexible copper wire t metal frame of apparatus. Run wire alon power cord to plug and cut to pig ta length. Attach pig tail to receptacl plate screw if installation has stee armored cable or to water pipe fo non-metallic cable.

This is the ideal method of home wiring. With three wire installation throughout the house, you are protected from shock. The third wire drains all potential electric shocks to a common ground.



wiring is metal conduit and armored cable, you can attach a ground wire to the receptacle plug screw or a water pipe, as shown in the illustrations. However, if your wiring is non-metallic, you cannot use the receptacle for grounding purposes since the non-metallic cable won't conduct electric current. In this case, ground wires must be connected to water pipes or metal framework of building. Never use gas pipes and make sure your water piping system is not insulated.

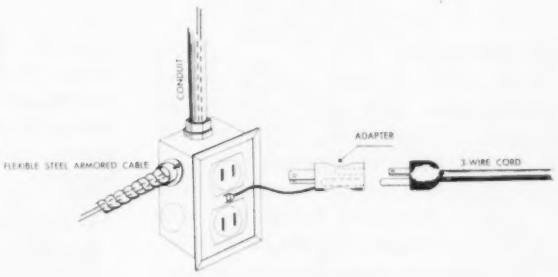
If you can't determine your type of wiring, have an electrician do so. Then proceed with grounding the equipment as shown in one of the illustrations. The small amount of time it takes is well worth the effort and peace of mind●

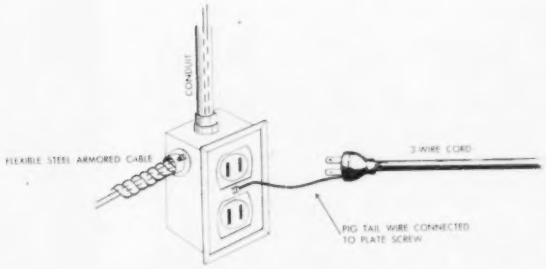
OTHER GOOD RULES

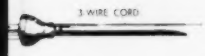
- *Be sure electric cords are not frayed or worn.*
- *Be sure receptacles and plugs are not cracked or broken.*
- *Do not run lamp or appliance cords over pipes, radiators or under rugs.*
- *If you experience a slight tingling shock disconnect appliance and have it repaired before using it again.*
- *Purchase only lamps, appliances and extension cords that bear the label of Underwriters' Laboratories.*

ur electric appliances

To adapt a three prong plug to a conventional two wire conduit or armored cable wiring installation: buy an adaptor with a pig tail and two prongs. Fasten pig tail of adaptor to receptacle plate screw for effective grounding.





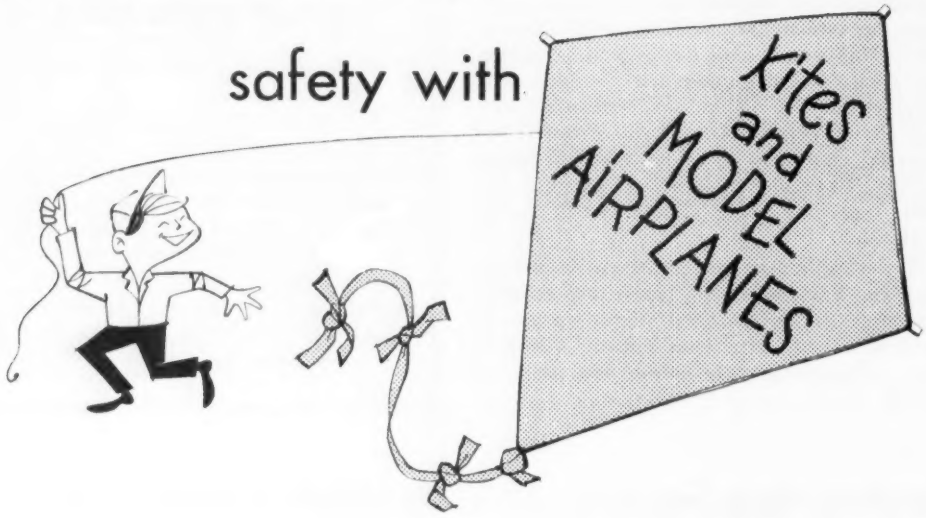


120 VOLTS CIRCUIT

To ground a three wire plug with a conventional two wire conduit or armored cable, attach pig tail of plug to receptacle plate screw.

safety education data sheet no. 70 rev.

safety with kites and MODEL AIRPLANES



Historical Information

1. The kite took its name from a bird of prey called the kite. This bird is noted for its powerful wings, gracefulness, ability to soar high and to glide for long distances.

2. Interestingly, the nest of the common kite is built of sticks, rags and string—the same articles used most often to make the kites we fly.

3. No one knows for sure who invented kites. Some say the Greeks, although popular notion credits the Chinese, who have flown them for many centuries.

Use of Kites

4. Kites have had some unusual uses. They have started lifelines to ships in distress and suspension cables across rivers. They have been used in meteorological and other scientific observations in measuring temperature, humidity and wind velocity. They have been rigged to take pictures for military reconnaissance and for other purposes. In World War II they served as aerial gunnery targets for United States troops. Kites, properly grounded, have served to elevate and suspend wireless and radio aerials in difficult areas. But they are best known for seasonal joy they bring to children and their parents.

5. Historically, Benjamin Franklin's famous experiment in 1752 of collecting the electricity of a thundercloud by means of a kite is well known. Perhaps less well known is the fact that the Wright brothers used a version of a box kite as a glider in their experiments at Kitty Hawk. In reality, early planes were motorized box kites.

The Accident Problem

6. There are no national statistics available on deaths and injuries to children caused by kite flying. It is common information, however, that numerous youngsters are killed and injured in this activity each year.

7. Telephone and power companies report that the remains of hundreds of kites are removed from lines annually. Some airport officials have expressed concern about high flying kites interfering with planes, particularly jets.

8. Typical accident cases are these: a) One boy was unconscious for 15 minutes and burned on the hands as result of using a fine radio wire as a string for his kite.

b) Two small children were burned attempting to "rescue" a kite from an overhead wire.

c) Youngsters have been killed and injured while flying kites near streets and highways. Many have walked into the path of motor vehicles while watching their kites.

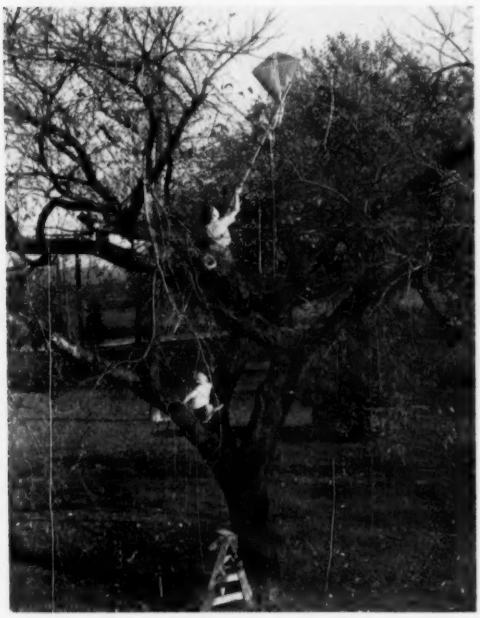
d) A high school physics book states that several people have been killed while repeating

Franklin's experiment and suggests that none of us should "play with lightning."

Recommended Safety Precautions and Measures

9. Fly your kite in a safe area.
   a) Select a level, open space where the wind has a chance to level off and blow steadily.
   b) Keep away from electric wires and poles, buildings, street and highway traffic, ditches, stones, electric signs, railroad tracks and reservoirs.
   c) Take advantage of recreational areas particularly adapted to this activity. For example, the department of parks of New York City has designated 17 areas for safe kite flying, plus eight safe model airplane flying fields, in the boroughs of Manhattan, Brooklyn, Bronx, Queens and Richmond. Other cities have similar areas.
   d) Do not fly your kite from the top of buildings. The hazards, including a tragic fall for yourself, are numerous.

10. Fly your kite only in dry weather. A wet cord is a conductor of electricity; wet shoes on wet earth increase the hazard since they enable a charge to be grounded more readily and this is dangerous.



Double trouble: flying kites near trees and electric wires and then climbing high to rescue tangled kite.

11. You risk your life when you climb up a tree or pole to try to get a kite from an overhead wire or roof. Avoid trying to knock the kite down with stones, too. It is better to lose a kite than risk your life. Buy or build another kite if your present one should break free or become entangled in wires or roof tops.

12. Construct your kite in, and for, safety.
   a) Draw a sketch of the kite you will construct: its shape and size, the length of sticks, cover, bridle and decorations. Advance planning to achieve a well-balanced, high-flying kite will keep you and your kite out of trouble.
   b) Use materials of sufficient strength: modern, varicolored plastic sheets, cellophane tape and the like; these assist fast, safe kite construction.
   c) Build your kite strongly. Test it for strength by wiggling the parts; then brace as needed.
   d) Keep safety in mind as you use scissors, hammers and nails, small saws, pliers, light drills, planes, sandpaper and clamps. Be careful to cut away from yourself when whittling sticks; close your knife blade when it is not in use.
   e) *Never* use metal, such as umbrella stays, in place of wood or plastic sticks.

13. Use a safe cord. It should be considerably stronger than the kite's estimated pull. It should *never* be of wire or tinsel cord . . . and the cord should never be used when wet; your kite may touch a high tension line. In addition, the volume of atmospheric electricity which may be accumulated in an exposed wire of several hundred or thousand feet is too dangerous an electric force to trifle with.

14. Learn to fly your kite skillfully and artistically. Balance, understanding of winds, adjustment of bridle, tail, bow, tautness and manipulative skill under varying condition—all these come with practice and study and make a difference in your enjoyment of your kite as well as in your ability to fly it safely at all times.

15. Do not let your kite fly over radio and television aerials.

16. Avoid freakish winds; study winds for evenness.

turn page

When learning how to handle model airplanes, children should first know which areas are safe for flying.

17. Use reels and wear gloves when flying large kites. These help to avoid burns in case the string runs through your hands too fast.

Model Airplanes

The Accident Problem

18. There are no national statistics on deaths and injuries to young people sustained while flying model airplanes. However, with the advent of inexpensive models and kits, the hazards of this sport are becoming more serious.

19. Typical accident cases are these:

a) An 18 year old boy was badly burned when his model airplane crashed into a power line.

b) A 14 year old boy flying a model airplane controlled by fine wire was killed when his plane collided with an electric wire. He was standing on ice at the time.

c) A 17 year old boy was killed when the control wire of his model airplane touched a high tension wire.

Recommended Safety Precautions and Measures

20. First, observe all the precautions suggested above in connection with flying kites.

21. Select a site large enough to do your flying away from power lines, electric wires, trees, homes, or pedestrian or vehicle traffic paths.

22. Provide for adequate spectator safety and control. Consider fencing, distance, proper supervision when setting up your site and making arrangements.

23. Post schedules for the use of facilities: publicize all safety precautions.

24. Handle gasoline and the special flammable fuels sensibly. Some of the fuels used for model airplanes will burn at temperatures as low as 20° F. The fuel is classified as gasoline for all practical purposes. Consequently you should:

a) Keep only a small quantity on hand —not over four ounces.

b) Store fuel out of doors in metal containers with screw tops.

c) Fuel planes out of doors, *never* in confined places.

d) If any fuel is spilled on parts of the engine where it is likely to ignite, wipe it off immediately.

25. Follow safety recommendations of the Academy of Model Aeronautics in regard to strength of wire, proper grounding and the like.

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This data sheet was prepared by Dalibor Kralovec, Director of safety, Philadelphia, Pa. public schools.

by A. E. Florio

Strengthen Physical Education

YOU'VE heard the statement "safety is no accident." When you organize for safety and accident prevention the statement becomes quite true.

Since the college physical education program exposes students to risks, we must be concerned with how to reduce the number and severity of accidents. The very element of danger makes physical education challenging and exciting. The activities also help to fulfill physical, emotional and social needs of our college students. Therefore, I strongly oppose curtailing activities on the fallacious assumption that the only way to prevent injuries is to prohibit hazardous activities. To insure students' safety by depriving them of valuable physical activity is certainly an undesirable solution to the accident problem. This may occur, however, unless school personnel can prove that there is a satisfactory alternative, and that proper attention to safety can minimize accidents without restricting participation.

To plan an effective accident prevention program, physical education teachers must thoroughly understand the environmental hazards and faulty practices commonly responsible for athletic injuries. Most accidents can be attributed to: poor leadership, faulty equipment, irresponsible student behavior, insufficient skill or poor physical condition. I will outline an organizational procedure that will minimize accidents in activity programs:

Administrative support—Here, we're talking about top administration: president, provost, dean, department head and area supervisor. This support should start with the administrative officer responsible for safety in the entire university. He would organize college or department safety committees and act as advisor to these committees.

College or department safety committee—This committee should include representatives from the various departments—physical education for men, physical education for women, recreation, health and safety and the personnel handling the equipment.

An accident reporting system should be set up to determine the nature and causes of the accidents. School or departmental accident policies should be developed.

Appoint area supervisors—This is particularly effective in departments with extensive programs and eight or ten instructors teaching the same activities. The area supervisor along with the instructor can eliminate hazardous conditions, check equipment and facilities, investigate accidents and try to prevent recurrence. He also inspects buildings, recommends improvements, and assists new instructors in teaching safe practices.

Indoctrinating new staff—Each year, the department head should orient new staff members with the correct policies and procedures used in preventing accidents. This may be done in an evening meeting, and should include a brief talk by the university safety coordinator, along with the department head or his representative. Include:

1. Alert yourself to the hazards involved in each activity.
2. Remove unnecessary hazards.
3. Exercise precautions for hazards which cannot be removed.
4. Create no unnecessary hazards.
5. Make sure the students acquire the knowledge, skills, and attitudes required for safe participation.

These suggestions can assist you in reducing and preventing accidents in your physical education program. It may also reduce the possibility of liability suits, bad publicity and criticisms of physical education. Organizing for safety in the physical education program may take some time and effort, but once started, it pays dividends by eliminating unpleasant situations and strengthening the entire program●

A. E. Florio is professor, College of Physical Education, University of Illinois, Urbana, Ill.

After the competition telecast, opposing teams wait tensely with Sgt. Perry as scorekeeper tallies final results.

Traffic safety on camera

Quiz Gets Prime Time

by Joe A. Perry

RAY WELLS, for 30 points for yourself and 30 points for your school, answer this, the moderator said. "It is illegal to make a 'U' turn when it can't be made safely. Under the state law, at what other time are you forbidden to make a 'U' turn, even when there is not a 'no turn' sign to prevent the turn?"

The TV camera focused on Ray. He was one of three students chosen to represent his high school on "Learn and Live," the traffic safety TV quiz program. Ray thought for a minute, then answered, "In a marked 'no passing zone.'"

"That's correct," the moderator said.

Then the moderator asked a student on the opposing team to describe the shape and color of four traffic signs: the stop, warning, yield right-of-way and railroad crossing signs.

The youth struggled through two descriptions. "Uh—the stop sign has eight sides and I think it's yellow and black or red and white. The railroad crossing sign is round and yellow and black." He paused, unable to describe the warning sign, a diamond shaped yellow and black sign and the triangular shaped yield right-of-way sign. He lost 30 points.

After each contestant had attempted one multiple choice question, the moderator gave the winning team first crack at the bonus question, worth 20 points. After this, each pupil was asked one final traffic safety question. The students had drawn numbers when they arrived at the studio for their turn for the multiple choice and final question.

At the end of the 30 minute telecast, the program secretary, a high school girl, totaled the points and announced the winning school and the top male and female scorers.

"These two schools will appear on the show three more times," explained W. J. Elliott,

Joe Perry is a sergeant in the safety education service of the Texas Department of Public Safety, Waco, Tex.

major, Texas Department of Public Safety, Waco, Tex. "Five high schools registered to compete on 'Learn and Live' and each school will compete against all the others. Each team has three members and the school can either use the same students for all four appearances or have different students each time."

Schools use different methods in choosing their representatives. Some schools select the most popular students, while in others, the driver education instructor makes the choice, usually on the basis of grades. Some schools give written exams to students who want to compete on the show.

Each team consists of three members who must have passing grades in school. One student acts as the team captain and makes all decisions during the program. He decides who answers the questions when the moderator calls on his team and where the students are placed on the program.

The program consists of three parts—multiple choice questions, the bonus question and the final questions.

For the first part of the show, the moderator has 12 questions, six worth 15 points and six worth 30 points. As he calls on each contestant, the student decides if he wants the easier 15 point question or the 30 point question. He can only answer one question.

The captain of the highest scoring team decides what member will answer the bonus question. If this team fails to give the complete true answer, the moderator will call on the opposition's captain who either answers the question or has five seconds to choose another member to answer.

"Except for the bonus question, all questions come from *A Digest of Texas Motor Vehicle Laws* and *Texas Driving Hand-Book*. Each contestant studies these books before the show," Elliott explained. "The bonus question is a hypothetical phone call from 'Mr. John Q. Public.' It concerns anything we think motor vehicle operators should know."

Contestants and teams can gain points through various means.

• Complete true answer: For a completely true answer, the contestant receives all the points. If he fails to answer the question *completely*, he loses all the points.

• Bonus Question: Points earned by correctly answering the bonus question count in the highest team's total score, not on the individual's score. If the high point team fails, the opposition can try for 15 points.

• Final Question: A correctly answered final question nets 20 points for the individual and 20 for his team. If the person fails, a member of the opposition can earn 10 points for himself and 10 for his team by correctly answering the question.

• Individual Score: Contestants' scores are totaled at the end of each program. Then, at the end of the show's 10 week schedule, the boy and girl with the highest number of points are given a wrist watch by the sponsor. In case of tie, a written test determines the winner.

• Team Score: Each team's score is processed after the program. The two highest schools receive Learn and Live trophies.

Individual and team awards are presented at an award's dinner.

"Learn and Live" is conducted and moderated by staff members of the Texas Department of Public Safety and the Greater Waco Safety Council. Different companies and groups have donated the trophies and watches●

Beaming victory smiles, winning team receives trophy for their school from Sgt. Perry and Major Elliott.

Teaching — Hazardous Profession?

TEACHING isn't dangerous, you say? Not so, according to Chicago School Supt. Benjamin C. Willis who presented school board members with $1,057 worth of teachers' medical bills.

The hazards of teaching include such cases as the physical education teacher who broke his nose while demonstrating how to throw a football block, and the innocent victim who tripped over a student's extended foot and went toppling, head first, into a desk.

One teacher learned the hard way that it doesn't pay to come between the pupil and the exit at the end of the day. She suffered a severe sprain after being bowled over by a student rushing for the exit.

Phys ed instructors were the ones who risked life and limb most often, according to an article in the *Chicago Daily Tribune*. Some instructors were victims of misguided baseballs and basketballs while others came in more direct danger with young sports enthusiasts.

One excited student sent the baseball whizzing into outfield and the bat into his instructor's head.

Another student accidentally kicked his instructor in the leg and sent him hobbling into the infirmary.

And still another teenage ball of dynamite collided with his instructor during gym. Class got out early that day as fellow teachers sought aid for the injured man.

Handling Problem Parents

from page 16

sion issued the order to all police units that the signs meant just what they said and would be enforced.

Congestion in front of schools was alleviated. Parents now arranged to pick up their children at predesignated spots some distance from school. Bicycle movements became more orderly. Children were now crossing at signalized intersections instead of between them. Safe routes to and from school were being used effectively. Roads were paved. Sidewalks were put in. Needed signal lights were installed. Safety patrols were upgraded. Parking lot entrances were relocated. The Denver program of replacing flashing red lights with pedestrian actuated signals was speeded up as the needs were shown.

Loading zones were established for school buses in many schools. A pedestrian bridge was built over an irrigation ditch to reroute students away from the road. Systems were established for loading and unloading students. Playgrounds were fenced. Blind corners were cleared. Parents learned that the safety of their children was basically their responsibility. Educational meetings for the parents continued.

Although all PTA's had a safety committee, many had been inactive. These were now activated with specific projects. The community was beginning to learn what could be done with a little effort.

All this was accomplished in an atmosphere of close mutual cooperation between officials and citizens. There was little rabble-rousing because the facts were first determined. Officials were ready to listen because they had first been consulted. Teachers and principals worked hand in hand with the safety committee because they were made a part of the program. Each school wanted to become recognized as the safest school in the area.

When the final results were posted last May, 60 schools were awarded certificates of achievement. The committee awarded four types of certificates: 1) *Superior Participation*—for outstanding work in solving a particularly difficult problem, 2) *Excellent Participation*—for outstanding work in solving lesser problems, 3) *Satisfactory Participation*—for working toward a solution to their problems, and 4) *Participation*—for working on a program that may eventually lead to a solution.

Cooperation brings success

One deputy school superintendent was heard to say that this was the finest safety program ever advanced in this community. He felt that because the program was a coordinated effort more had been achieved and more positive effort expended than ever before.

The school safety committee of the Metropolitan Safety Council, bolstered by their success last year, is now revising the program for this year. In addition they are developing programs for junior and senior high school groups.

Problems occur on a local level. Solutions must be developed in the same place. Action taken on this level can and did have a total effect on the traffic safety program in the Denver area. Thanks to a school committee dedicated to positive thought and direct action, to the local PTA units and school administrations who recognized the benefits of such a program, a greater safety impact has been made on the citizens of the area. Even more important is the fact that parents are beginning to learn of their primary responsibility for the safety of their children and their community●

Designing for the Handicapped

from page 8

for crippled, mentally handicapped, deaf, blind and partially-seeing children. This minimum should be increased if storage and various activities (such as rhythm games, home economics or pre-vocational therapy and rest facilities) are provided in the same room.

8. Speech correction, school social work and psychological services are often carried on in small office-sized rooms. For efficiency, these rooms are sometimes remotely located in buildings, may be sound-proofed, or may be accessible only through other areas. People working in such rooms may not hear fire alarms or other signals. Many instances could be listed where persons in such rooms did not know that a fire drill was being held. Unusual planning must be given to reduce the hazards of such situations.

9. Provisions should be made so that in emergencies the teachers of handicapped children will have assistance in moving their children. Crippled children may need to be wheeled or carried to safety. Blind children may need to be guided. Others may need supervision in getting out of the building and moving to safety. Some handicapped children need doors opened and held for them. In some cases a child may be in the rest room when the emergency occurs.

10. Fire marshals, insurance inspectors and other competent investigators should be invited to the school to discuss the particular safety provisions needed for handicapped children. They can advise on the use of sprinkling devices, locations of extinguishers, draping of windows with fire-resistant materials and other important factors.

To Sum Up

1. Saving money by cutting costs in school construction results in greater hazards.
2. Physical construction is very important but it can never take the place of, or eliminate the need for, planning and practicing for emergency situations.
3. Heating plants, electric wires and combustible materials can't think. Sometimes, children don't think. The teacher, principal, custodian and other adults must think.
4. To paraphrase a popular admonition—"Only *you* can prevent school hazards."
5. Handicapped children represent unusual needs for safety provisions in school. For exceptional children there must be exceptional provisions.
6. Safety in school is a part of the teaching-learning process●

New NSC Awards for Youth, Groups

THE National Safety Council has announced a series of awards to honor youth and youth organizations.

The awards are designed to give national recognition to youth organizations for outstanding service in preventing accidents and promoting safety.

Separate awards, graduated according to importance, will be made to students and organizations. The awards to youth organizations are the *Award of Honor, Award of Merit* and the *Certificate of Commendation.* Awards to individuals are the *Citation for Distinguished Service to Safety,* the *Citation for Outstanding Service to Safety* and the *Citation for Meritorious Service to Safety.*

It is hoped that the awards will encourage and stimulate effective safety efforts and broaden cooperation among youth groups and other agencies working toward accident reduction.

The awards are non-competitive. Nominations may be made by an organization or individual and must be made before September 1. For additional information and a nomination form, write the manager, Youth Activities Department, National Safety Council●

March 1961

S-1945-A

lower elementary

safety lesson

Safe Playing

It was a rainy Saturday morning.
The children could not play outside.
Mother said they could have friends in to play.
Father said they could play in the basement.

He said there would need to be some rules.
They would be safety rules.

Here are the safety rules that Dad made:

Do not open the *furnace door*.
Do not touch the furnace *controls*.
Do not play with the *washer*.
Do not take anything out of the *cabinets* or *shelves*.
Do not touch Father's tools.

Why did Father make these rules?

Tell a reason for each one.

Jerry asked, "What can we do in the basement?"

Here are some suggestions: shuffle board ring toss darts (rubber tips) marbles hopscotch build models

Name another good basement game. On another paper draw a picture of it.

"When there is no sun, try *safe* basement fun."

Published by the National Safety Council. Price $.28 each for 10 to 49 subscriptions; minimum order 10; lower prices for larger quantities; order by stock no. 461.01-1. Write the Council, 425 N. Michigan Ave., Chicago.

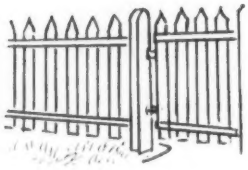
Prepared by James Mann, principal, Hubbard Woods School, Winnetka, Ill.; past general chairman, Elementary School Section, National Safety Council.

Safe Outdoor Play

After lunch the sun came out. The children went into the yard to play. It was the first time since winter. They found many things to do. They remembered what they knew about safe play. Let's see what they did.

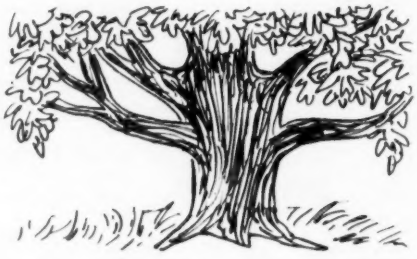
First they tried the swings.
They looked at the seat.
They looked at the rope.
They looked at the top where the rope was fastened.
Everything was safe and sound.

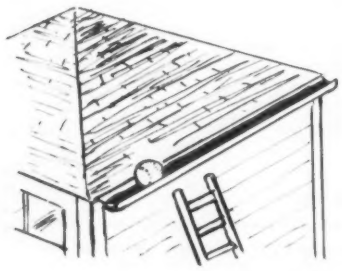
Rule: When someone is swinging, stand _____ from the swings.



Someone wanted to climb the fence.
The fence was quite high.
It had sharp points on top.
They said, "We won't climb the fence."
"It isn't safe."
How do you get through a fence?
Use the _____

There was a nice climbing tree.
It had long, low branches.
It had smooth, strong limbs.
They decided it would be safe to climb.
They were very careful.
Rule for climbing trees:
Don't go too _____
Hang on _____
Don't go too far _____ on the limbs.





They played catch with a ball.
The ball went up on the garage.
It stayed in the gutter.
Should they ask Father to get it?
(Answer *yes* or *no*)
Shall they climb up? _____
Will he get a ladder? _____

It's better to be *SAFE* than to be *SILLY*

March 1961

upper elementary

safety lesson

S-1945-A

A Rainy Saturday Morning

It is a rainy Saturday morning in spring.
You invite friends in to play with you.
Mother suggests that you play in the basement.
Father says, "It's all right, but you must be careful."

What does Father mean? What must we be careful of?

Here are the things to remember—for safety:

Furnace—Do not open the door or touch the electric controls.

Laundry—Do not play with the washer or dryer. Do not touch cleaning fluids, detergents, etc.

Tools—Do not use tools without permission. Never turn on a power tool.

Electricity—Stay away from switch boxes and fuse boxes. Do not turn on lights or connect extension cords while standing on a wet or damp floor.

There are many safe things to do in a basement. *Here are some:*

shuffle board ***dart games*** **(use rubber tip darts)**
ring toss ***marbles*** ***horseshoes*** **(rubber shoes)**
Play with *electric trains* . . . build *models* . . . make *kites*

Discuss other suggestions from the class. (Be sure they are safe)

Here are some things to *avoid* or to use with *caution*: Tell why.

Matches _____

Knives _____

Plastic bags _____

Guns (target shooting) _____

Can you name others? _____

_____

Published by the National Safety Council. Price $.28 each for 10 to 49 subscriptions; minimum order 10; lower prices for larger quantities; order by stock no. 461.01-2. Write the Council, 425 N. Michigan Ave., Chicago.

Prepared by James Mann, principal, Hubbard Woods School, Winnetka, Ill.; past general chairman, Elementary School Section, National Safety Council.

Be Safe—Not Silly

Look at the picture for March. What does it mean?
Do you see that many things we do have two possibilities?
What does the slogan "Be Safe—Not Silly" mean?
Let's see how this applies to a Saturday in spring.

Playing in the Yard

Do you have a swing, a teeter, monkey bar, traveling rings?
They have not been used all winter.
Each one may have something wrong with it.
Tell what you would check each one for.

Swing _____, _____

Teeter _____, _____

Bar _____

Rings _____ (See answers below)

Do you feel like climbing? Here are some safe vs. silly things to do.

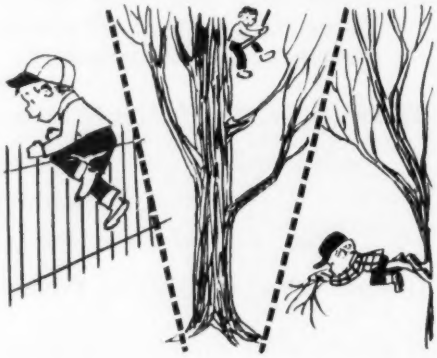
"Silly" Things

Climbing fences that have sharp wires or pickets at the top

Climbing very high trees

Climbing far out on weak limbs

Climbing onto roof tops



"Safe" Things (Tell what to do instead)

Here are some other "Silly" things — Write "Safe" suggestions here:

Playing in the street

Picking up junk

Running with sharp objects in hand

Answers to checking equipment: Swing — worn rope, broken seat, worn connections at top. Teeter — broken or splintered board, loose hand holds. Bar — Broken upright, roughness. Rings — broken chains.

Good judgment and good fun go together: Be safe — not silly.

March 1961

S-1946-A

junior high school safety lesson

Time For a Decision

In the visual aid supplement above, the student is thinking about the many careers in safety. Of course he hasn't thought of them all, but he *is thinking* about them. While you still have quite a bit of time left for making a final decision about your career, the earlier you start, the better your chances for success.

Let's look at some of the careers, and how the very work you're doing now ties in with those careers.

English

"We didn't have a very merry Christmas in Chicago, this year. That is, I hope most of the children did, but the adults didn't. Every time we saw a happy child's face, our mind's eyes flashed a picture of a home saddened because a child was missing. Chicago had just experienced its worst disaster since 1915. The tears of the nation, and of the world, blended with ours."

by Vivian Weedon, Curriculum Consultant, N.S.C.
from Mississippi Educational Advance *February, 1959. (Written after the disastrous school fire in Chicago.)*

1. What makes this beginning particularly effective?

2. Pick two examples of figurative language that increase the effectiveness of the writing.

A. _____

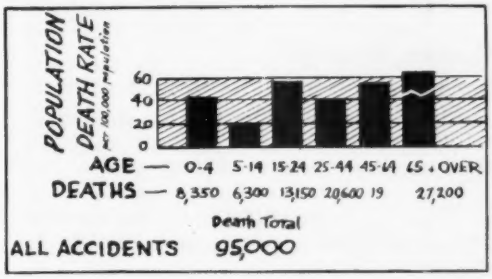
B. _____

3. Give an example of the effective use of *contrast* in one sentence.

Answers: (1) "We" gives a close feeling; also, "Christmas" is an experience understood by all. (2) ". . . our mind's eyes flashed a picture . . ." and "the tears of the nation, and of the world, blended with ours." (3) "Every time we saw a happy child's face . . . home saddened because . . ."

Mathematics

1957 Accident Rates



1. If the 1957 population were 170,000,000 people, exactly how many people would have died?

2. Why does the graph show *death rate* rather than the specific number of deaths?

3. Why is there a *break* in the bar graph for the "65 and over" category?"

Published by the National Safety Council. Price $.28 each for 10 to 49 subscriptions; minimum order 10; lower prices for larger quantities; order by stock no. 461.01-3. Write the Council, 425 N. Michigan Ave., Chicago.

Prepared by Vincent McGuire, professor, Secondary Education, University of Florida, Gainesville, Florida.

It is obvious that the general area of mathematics is an essential area of knowledge for a safety career. Math is a useful tool for analyzing and solving accident problems.

Answers: (1) 94,860; (2) Bar graphs showing specific numbers would be either too high or too vague. (3) The "65 and over" bar would run off the page if drawn to fit the measurement indicated.

Social Studies

Here is some of the legislative action introduced in 1959.

Illinois—H. 1267—prohibits operation of vehicle in Chicago by persons under 18.

Alabama—S. 41—permits issuance of learner permit to persons between ages of 15 and 16.

California—S. 671—provides that minors shall receive same treatment for traffic violations as adults.

Florida — H. 400 — exempts minors charged with traffic violations from juvenile court jurisdiction.

Vermont — H. 80 — provides for establishment and regulation of driver training schools.

1. How many of the above bills originated in the House of Representatives of the state legislature?

_____

2. What does the number in each case, mean? _____

_____

3. What U.S. constitutional amendment enables states to pass laws similar to those above? _____

_____

Social studies provides an opportunity to study our laws, our government, and our history. Many lives have been saved because of wise laws. Many injuries and deaths have been prevented because of wise planning by state and federal governments.

Answers: (1) Three—"H" stands for House and "S" for Senate; (2) the number of the bill indicates the number of bills introduced up until that time during that legislative session; (3) tenth—"powers not delegated to the United States by the Constitution, nor prohibited to the states, are reserved to the states."

Science

Too many drivers mix drinking with driving. The National Safety Council estimates that a drinking driver is involved in about 30 per cent of all fatal accidents.

The development of scientific methods for determining the degree of intoxication dates back over 100 years. The fact that alcohol is eliminated from the body through the lungs was first verified by scientific observation in 1854. Through the years scientists of many nations have contributed to the development and study of chemical tests for alcohol. In 1938 Dr. R. N. Harger invented the first practical portable breath alcohol apparatus, the Drunkometer.

The breath of the subject being tested is passed through a chemical reagent which changes color in proportion to the amount of alcohol present in the subject's breath. The amount of color change in the reagent is measured, either visually or by means of a photo-electric cell, and then translated on a calibrated scale to show the level of alcohol in the blood.

1. In approximately what per cent of fatal accidents are drinking drivers involved? _____

2. How is alcohol eliminated from the body? _____

3. What is a "reagent"? _____

_____

Science is used in many ways as an aid in accident prevention. Chemistry, physics, physiology and other branches of science give valuable help in helping to solve the accident problem.

Answers: (1) 30 per cent; (2) through the lungs; (3) a substance used to detect the presence of other substances by the chemical reaction it causes.

Gather Data—Then Plan

From the foregoing excerpts, it is obvious that the school subjects you are studying now will prove to be valuable tools for a safety career later on. In addition, however, you should begin to gather specific data in this important area of work. For example, the National Commission on Safety Education of the National Education Association (1201 Sixteenth St., N.W., Washington 6, D. C.) is an excellent source of information on safety careers. Write to this agency, search your school and town library, invite speakers from industry, and use other means of collecting data in regard to this important career possibility.

March 1961

senior high school safety lesson

S-1946-A

Time For a Decision

Looking Ahead

In the visual aid supplement above, the student is facing the same problem you will have to face in the near future. In other words, you will have to choose a career. The purpose of this lesson is to have you consider a career in the field of safety.

A growing concern over the increasing costs of accidents—in terms of lives as well as money—has caused industry to place a great deal of emphasis on safety programs. The results of safety programs, administered by people especially trained in the field of safety, have been good. Therefore, industry is constantly on the alert to hire capable people in the field.

A "Capable" Person Can Read

In the material that follows this section, there are approximately 400 words — including two graphs (counted as 25 words each). Your teacher will give you exactly two minutes to read the material.

When you have finished reading the material, answer the questions that follow it. In this way, your comprehension can be checked. If you haven't finished reading when the teacher calls time, mark where you are reading and answer as many questions as you can. Later you can count the words you read and determine your "words per minute" rate by dividing by two. Also, you can determine your comprehension by seeing how many questions, based on what you read, you answered correctly.

The American Society of Safety Engineers was organized in 1911 under the name of "United Association of Casualty Inspectors." Since that date the Society has grown in membership, purpose and importance.

Today, the ASSE has established three grades of professional membership: Member, Associate Member and Junior Member. The following qualifications apply in each case.

Member: at least 30 years of age, and engaged in safety engineering. He shall have either a degree from an accredited college of engineering and have the equivalent of eight years' experience in safety engineering, or he shall have had the equivalent of ten years' experience in safety engineering.

Associate Member: at least 25 years of age, and engaged in safety engineering. He shall have either a degree from an accredited college of engineering and the equivalent of three years' experience in safety engineering, or he shall have the equivalent of five years' experience in safety engineering.

Junior Member: at least 20 years of age, and shall be engaged in safety engineering, which if pursued for the required time will qualify him for the grade of Associate Member. He shall have either a degree from an accredited college of engineering or shall have the equivalent of one full year's experience in safety engineering.

The job titles of people belonging to the ASSE include the following: safety engineer, safety director, safety supervisor, safety manager, safety superintendent and combination titles such as plant engineer and safety director, personnel supervisor and safety director.

Published by the National Safety Council. Price $.28 each for 10 to 49 subscriptions; minimum order 10; lower prices for larger quantities; order by stock no. 461.01-4. Write the Council, 425 N. Michigan Ave., Chicago.

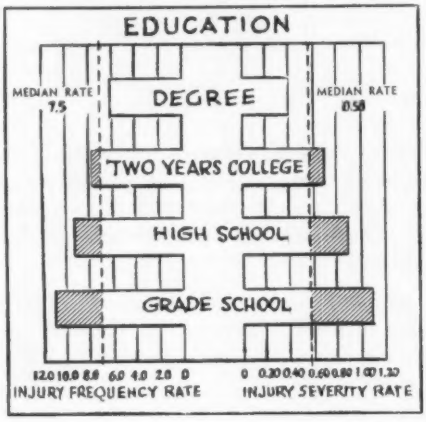
Prepared by Vincent McGuire, professor, Secondary Education, University of Florida, Gainesville, Florida.

In a sampling of the membership of the ASSE, it was found that 144 had college degrees, 95 with two years of college, 144 with high school diplomas, and 35 who had not completed high school but who had supplemented their accident prevention experience with safety courses in accredited colleges and universities.

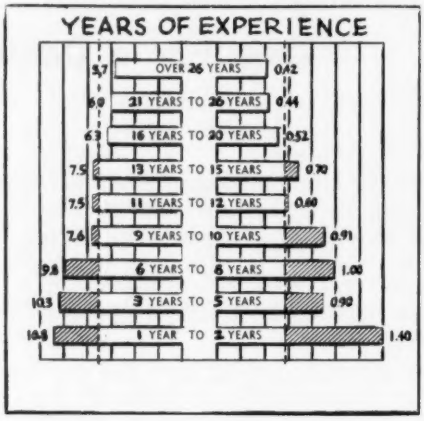
In regard to yearly salary, 53 made over $10,000; 22 from $9,000 to $10,000; 44 from $8,000 to $9,000; 71 from $7,000 to $8,000; 97 from $6,000 to $7,000; 78 from $5,000 to $6,000, and 57 below $5,000.

The following two charts show the relationship between experience and injury rate and education and injury rate.

Education and Injury Rate



Experience and Injury Rate



Published by The Management Research & Development Division of The Society for Advancement of Management, 74 Fifth Ave., New York 11, N. Y.

Reading Quiz

Directions: Answer each of the following questions. Do not re-read any of the material.

1. The abbreviation ASSE stands for _____.

2. The ASSE has three grades of professional membership: _____, _____, and _____.

3. All three grades of professional membership have the same minimum age qualification. True _____ False _____?

4. All three memberships require a college degree. True _____ False _____?

5. All three memberships require that the applicant be engaged in safety engineering. True _____ False _____?

6. No safety engineer made over $10,000 per year. True _____ False _____?

7. According to the charts, there is a definite tendency for those safety engineers with more formal education to have better (lower) records of accident injury frequency rates. True _____ False _____?

8. There appears to be a record of higher injury severity rate for those safety engineers with more formal education. True _____ False _____?

9. According to the charts, the amount of experience of the safety engineer does not have any apparent relationship with the injury frequency rate. True _____ False _____?

10. According to the charts, the amount of experience of the safety engineer does not have any apparent relationship with the injury severity rate. True _____ False _____?

Answers: 1. American Society of Safety Engineers; 2. member, associate member, junior member; 3. false; 4. false; 5. true; 6. false; 7. true; 8. false; 9. false; 10. false.

Follow-Up

It is apparent that education and experience are two large factors figuring in the success of safety engineers. Other careers in safety require good education and experience too.

Follow up your study of safety engineers by learning about the other careers in safety. Write to the National Commission on Safety Education, National Education Association, 1201 Sixteenth St., N.W., Washington 6, D. C., for information on careers in safety.

Start *now* to gain the knowledge and experience.

Birth of a Lesson

from page 10

Drawings expected of the child also require more room at this level.

A good portion of the material should involve some activity by the child (to secure his participation and interest in the subject matter). The demand varies, of course, according to grade level. In choosing the activity, the main criterion for evaluating it is: Does it necessitate thought on the part of the child and does it require him to use the information in a manner within the range of his skills? For example, the first grader might be asked to color the traffic light which means *stop*. This means he must consider position, color and significance of traffic lights and can act within the range of his skills. The older child may be asked to draw or list three safe routes around the playground not mentioned previously. This entails synthesizing previous discussion, drawing out certain principles and applying them to new situations—the writing and sketching both within the range of his higher level of skills.

In the preparation of safety materials, it is recognized that the role of the teacher is all-important. By her use or misuse of materials she can render it effective or she can make it useless or worse. Through her creativity, she can put life and meaning into the material. She can bring it into focus and suit it to the environment. She can make it function in the children's daily actions or she can relegate it to dull and lifeless paper and pencil exercises. The materials contain the information, the teaching suggestions and the clues to the creative approach, but it is the teacher who must finally make it useful to children●

You're Not to Blame, But —

from page 5

chemicals unless you are definitely sure of the reaction which will result.

3. Avoid experimenting to see "what will happen." Always know what will happen before putting the things together.
4. Observe the same rules at home that are observed in the science classroom during experimentation.
5. Avoid getting dangerous chemicals which are not in the original set unless the chemicals are known as to characteristic and reaction.

The area of amateur rocketry is very dangerous for anyone except the most skilled individuals. The very nature of the fuels involved, the amounts needed, and the lethal nature of both the fuel and the rocket as a potential missile emphasize the seriousness of this area of amateur investigation.

Few science teachers are qualified to supervise rocket experiments. Furthermore, the firing of rockets should be done strictly on approved test ranges. Few amateurs have access to approved test ranges.

In light of these facts, science teachers and school authorities should not sanction this kind of amateur experimentation by members of their student body. This need not alter the teaching of rocketry as far as science-math application is concerned. This field of study is an important one in science and students should be introduced to the problems of space exploration. However, this teaching should stop short of actual fuel and firing experimentation.

The scientific attitudes which can develop from home hobbies are very desirable. If proper safety rules cannot be followed or enforced it is questionable if the growth of scientific attitudes is worth the risk of injury. The prime responsibility of the teacher is to develop rules which will pertain to science hobbies as well as supervised demonstrations in the classroom.

The emphasis on science safety has been neglected in junior high science programs. Yet it is probably most important at this age level. Upon this beginning more can be built at the secondary level.

Safety teaching can be accomplished not only through respect for science and the tools involved, but also with increased interest in the proper mastery of science information. More probably it will come when science safety is taught as an integral part of the science programming. In this fashion the meanings, understandings and necessity for science safety can be accomplished.

There is still much to be done in the field of science safety. Teachers must be taught to recognize the importance of safety in the science laboratory. Few science rooms are safely equipped with fire extinguishers, sand buckets, procedure for disposing of chemicals and broken glassware. With proper advance planning and small outlays of money these things can be rectified. A science teacher will be doubly rewarded if he combines the teaching of science with science safety●

Book Review

Safe Living, Harold T. Glenn, Chas. A. Bennett Company, Inc., Peoria, Ill., 1960.

This attractive book with an instructor's guide and study guide is geared for a course or integrated study for the junior high school. But, it would also fit the needs of those teaching safety during the freshman and sophomore years since the long, final chapter covers pre-driver education. This emphasis, though very useful as the legal age for driving draws near, diminishes somewhat in value as younger students are taught.

Coverage of the book is complete and the format, including excellent cuts and line drawings, should be exceptionally attractive to the student. If the "thousand words" fable were used for each picture in *Safe Living* this book would be an encyclopedia.

The study guide includes questions and project suggestions on the text. The instructor's guide contains an exhaustive correlated audio visual list with sources, which should be most useful to the instructor.

Safe Living is based on an impressive list of contributing reviewers and an extensive list of source books and other materials contributed by agencies and commercial organizations. It would seem to be a welcome addition to a growing field.

Coming Features Next Month

- Report of a special study on farm shop accidents and the resultant recommendations for teaching safe practices with farm machinery.
- An entire city in California united to stop bicycle accidents. How the schools developed the classroom study and how the parents aided in skill testing make a real success story.
- Today, more cars than ever are seen tugging boats over the highways. This takes skills which are now being taught in driver education classes. Suggested study program plus many safe practices are included in this article.
- One author tries to figure out why we are more successful in teaching arithmetic than safety.
- Louisiana has an all state youth safety council with a unique program for recognizing the fine efforts of local chapters.
- What's the elementary principal's role in safety education? One principal tells his idea of the administrator's responsibility.
- One school district realized it had not a unique but an increasingly serious problem — water safety. And it organized school instruction for both elementary and secondary students.
- Safety education data sheet will cover safe practices while fishing.

DRIVER EDUCATION

29 films on problems of driving

General Design of the Series

The DRIVER EDUCATION series is designed to supplement the class-room phase of driver education as offered throughout the United States. Its main objective is to emphasize the developing of attitudes and civic responsibility. It also strengthens the effectiveness of practice driving by providing a better understanding of safe driving habits. All aspects of the driver in various driving situations are shown. Problems in highway driving, city driving, emergency situations and human relations in traffic are presented with emphasis on the conditions necessary to make each person a safe, more efficient, and happier driver.

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THE NATURE OF THE ROADWAY
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PREPARING TO START AND STARTING, STEERING, STOPPING, BACKING
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